Chapter 9

#### **COST ANALYSIS PROCEDURES AND GUIDELINES**

1. Cost Analysis Committee. The Mission of the Cost Analysis Committee is to provide cost support to the Detailed Analysis Group (DAG). Members of this committee are:

Air Force (Chairman) HQ AETC/FMAT

> 1851 First Street East Suite 1 Randolph AFB, TX 78150-4315

DSN 487-3550

Army—Non-Medical **HQ TRADOC** 

ATTN: ATRM-P

5 North Gate Road, Bldg 5F Fort Monroe, VA 23651-1048

DSN 680-2341/4242

Army—Medical AMEDDC&S (MCCS-R)

2250 Stanley Road

Fort Sam Houston, TX 78234

DSN 471-7348

Chief of Naval Education and Training (ETE43) Navy—Non-Medical

250 Dallas Street

Pensacola, FL 32508-5100

DSN 922-4038

Navy—Medical **BUMED-55** 

> 2300 E Street NW Washington, DC 20372

DSN 762-3820

CG TECOM C464 Marine Corps

2008 Elliot Road

Quantico, VA 22134-5029

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Training Resource

Headquarters Coordinator

Air Education and Training Command (DOZ)

2 "F" Street, Suite 2

Randolph AFB, TX 78150-4325 DSN 487-6363 Comm (210) 652-6363

- 2. Service Cost Analyst Instructions. The following paragraphs will assist the analyst in preparing and documenting the ITRO Cost Analysis (to be completed by Service Cost Analyst).
- a. Background. The ITRO EXCEL model used in cost analysis simplifies the complex process of analyzing the myriad of cost impacts in the decision making process. The model uses an incremental/decremental cost approach. The model defines the current training costs, the baseline, as the costs associated with the future production level just before the ITRO driven change. Using the model, we measure the additional costs or savings for the proposed training and compute an incremental/decremental cost impact. Prior to this model, all data was manually calculated and compiled on worksheets. The model is well designed and easy to operate. There are, however, some points that should be considered when completing the sheets. This section will attempt to bring these into focus and, hopefully, remove any confusion in completing the cost data sheet. Starting at page 9-7 and continuing through 9-20, a partial example of a cost analysis report (Figure 9-1 through Figure 9-3) and a completed cost data sheet as well as

enclosures and exhibits is illustrated. The report does not include an equipment purchase list and only includes Army sheets for one option. A complete report would include sheets for all services and all options. You may want to make reference to it while going through the process.

#### b. Step-by-Step Process

- (1) Before beginning a cost data sheet, you must determine whether you are host or non-host for the option under consideration. Host sheets provide for incoming population changes and non-host sheets recognize departing population changes. We will discuss the steps for a host sheet and make comments for non-host exceptions.
- (2) Source data for the cost data sheet comes from several documents. The Cost Analysis Data Requirements Form or Twelve Question Form (ITRO Form 7) submitted by the service representatives provides most of the data. Additional data comes from Course Data (page 9-16), Student Travel (page 9-17), Surveillance and Implementation Travel (page 9-18), and Travel Information (page 9-20), Equipment Lists for Transfer, Equipment Purchase Lists, Transportation Cost Letters, and other miscellaneous documentation exhibits as required.
- (3) The following is a step-by-step journey through the cost data sheet. When you open the cost data sheet (either Host or Non-host Excel file), you will notice several worksheets whose contents are indicated by the names on the tabs at the bottom of each. Your will initially be working with the "Draft Cost Sheet". While running the model, you will notice all cells requiring input are indicated in blue font on the computer screen. Cells whose font is not blue indicate that the information is either imported from another worksheet or contains an automatic calculation. These cells have been protected to prevent accidental overtyping. We will discuss the steps for a host sheet and make comments for non-host exceptions.

#### **PART I - COURSE DATA**

Note: Paragraph numbers below refer to the numbering used in the cost model. Reference to "enclosures" and "exhibits" refers to enclosures and exhibits in the cost model itself, not this manual. Begin by editing cell E2 to enter the option number and cell I2 to enter the date corresponding to the last day of the study.

- 1. No entry required.
- 2. Enter the study title. Also enter the proposed action, e.g., "Consolidate Army and Air Force Communications Training at Fort Gordon". Paragraph 2 also references Enclosure 1, which contains the course data (see 9-17). Before proceeding, you should complete Enclosure I using the information provided in the Twelve Question Form or by the subject matter expert. To access Enclosure 1, click on the worksheet scroll bar at the bottom left of the screen until the Enclosure 1 worksheet comes into view. Click on the worksheet tab to select it and then enter the required course data. Note: Student input is also known as throughput. It is not average daily student load (ADSL). It is the annual number of personnel entering the classroom. Also, to compensate for the lost administrative time when converting from Service peculiar training week computation to ITRO, add 0.1 weeks administrative time for each training week to a maximum of 0.4 weeks (i.e., a 3-week course will be increased by 0.3). Army and Marines will add administrative time only to the proposed course length. Air Force and Navy will add the value to the baseline and proposed course lengths. The cost analyst should ensure the manpower analyst has included this addition in the course lengths and student load calculations provided for the costing effort. Note that consolidated courses and collocated courses are entered on different sections of the Course Data worksheet.
- 3. Enter current location of training (i.e., the site of the training in the study target year should ITRO not happen).
- 4. Enter proposed location of training.
- 5. No entry required, but ensure the Inflation Factors Worksheet is updated with the most current inflation factors. Inflation factors are available on the web at www.dtic.mil/comptroller. This gets you into the DOD Comptroller homepage where you should select "Defense Budget", and at the next page select "National Defense Budget for FY XXXX (Green Book). The factors are in Table 5-9 of this document. Once the Inflation Factors Worksheet is completed, the consolidation year in the cost data sheet is imported automatically.
- 6. No entry required.
- 7. No entry required. Values are pulled directly from Enclosure 1.
- 8. No entry required. Values are pulled directly from Enclosure 1.
- 9. Input percent PCS/TDY enroute students from the 12 Question Form in 9a, i.e., 10 percent entered as 10. The TDY and return percentage is automatically computed in 9b. PCS/TDY en route percentage represents the percentage of annual trainees coming directly out of basic training.

- 10. Enter average student grade from the 12 Question Form. This is the average grade that will be used on line 17a(1) to calculate increased/decreased student pay resulting from a change in ADSL between the current and proposed training course.
- 11. No entry required. Reserved for future use.

#### **PART II - INCREMENTAL COST DATA**

- 12. <u>Permanent Party Delta</u> Incremental manpower data is taken from the manpower worksheets. It is the difference (delta) between the "proposed" and "current" lines on the sheet and is provided by the manpower analyst. These incremental changes are only for the service preparing the sheet. Other service changes are reflected on their sheets. Enter the military/civilian incremental changes for service preparing the sheet in subparagraphs a, b, c, and d.
- a. <u>Avg Salary</u> Taken from OSD Military Composite Standard Pay and Reimbursement Rates available on the web at www.dtic.mil/comptroller/rates. They include the normal PCS rotation costs, are service specific, and vary slightly by grade. The average represents the rate for the mix of grades reflected in each category above. It is always a positive number. This section relates directly to 12a-d. Enter the average salary for military and civilian personnel changes identified on the manpower sheets. For BOS personnel (line c), use the composite salary rate for an E-5/GS-5.
- b. <u>BOS NP Var cost Factor</u> Factor provided by service. It represents costs in BOS other than personnel to support one man-year. When entered, the spreadsheet automatically multiplies the factor by the population change to produce the increase/decrease in nonpersonnel BOS funding resulting from the population change. For the host service, the cost is derived by taking the total incoming population from other services, adding the incremental population and student load changes for the host service, and multiplying by the BOS NP Var Factor. For the non-host service, taking the total outgoing personnel times the BOS NP Var Factor derives the cost.
- c. <u>Msn NP Var Cost Factor</u> Factor provided by service. It represents direct mission costs for one student load.
- d. <u>Personnel Cost</u> Automatically calculated, no entry required. This section takes the product of the permanent party deltas (entered in 12a-d) and the average salaries to give the incremental cost or savings for manpower.
- e. <u>Incoming/Departing Personnel</u> For non-host sheets, use the "current" line from your service's manpower worksheets as departing personnel. It will have changes for overhead, instructors, and detachment personnel. For host sheets, use the "total proposed" line from the other services' manpower worksheets as incoming personnel. Incoming personnel are provided by your service counterparts by exchanging BOS Population Change sheets (Page 9-21). Base population change sheets are prepared by service cost analysts transferring training to a host service. This section of the cost data sheet shows by service the total "proposed" personnel relocating to the host base as a result of the training consolidation. The top section is fed by the matrix below it, which is completed to show the positions by service and classification. Consolidated and collocated student loads have to be entered separately since mission cost for collocated student loads is not transferred to the host.
- 13. Non-Personnel O&M Cost/(Savings) Automatically calculated, no input required. Computation varies whether working with a host or non-host change. For mission costs on host sheets for all services, the model takes the incoming consolidated student load plus the host student load change times the school mission factor. For mission costs on non-host sheets for each service, the model takes the departing consolidated student load times the school mission factor to compute the recurring cost savings. For BOS costs on nonhost sheets for each service, the model takes the total departing personnel times the BOS factor. For BOS costs on host sheets for all services except Army, the model takes the total incoming personnel plus the host incremental personnel and student load changes minus the BOS incremental personnel change times the BOS factor. The BOS incremental personnel change is removed because non-Army BOS factors are mission population driven. Army sheets do not make this adjustment since the Army factor is total population driven. 14. Equipment Cost/(Savings) - Data is taken from the twelve-question sheet (ITRO Form 6). All entries must be documented. For instance, equipment purchase must have an exhibit attached showing items and quantity with price, transfer costs must have shipping list and cost estimate from the service's transportation office or other source, and maintenance cost must show source of contractual information. We must be careful with mission costs. If it is organic (in house) it should be captured in the manpower analysis. Discuss with the manpower analyst before adding in any cost. If it is contractual it may already be in the mission cost factor. Cost analyst should get a breakout of elements in their mission factor to determine if contract maintenance has been included. Rules for who pays are contained in this procedures manual. Generally for equipment used in consolidated courses, the cost is prorated to the services based on ADSL unless the

equipment is for a service unique track. Participating service pays for collocated and consolidated service unique requirement. Participating service ships their available equipment at their cost regardless of consolidated or collocated status.

- 15. Facility Cost/(Savings) This information is provided by the facilities analysts.
- 16. Travel Cost/(Savings)
- a. The student travel costs are imported from Exhibit 1. Access Exhibit 1 by scrolling through the worksheets until you can select the correct sheet. The number of students is automatically imported from Enclosure 1. You must update or verify the students' originating locations and, using the Twelve Question Form, enter the percentage of students from each listed location. Beginning in cell N32 enter the airfare for the before ITRO city pairs listed. Do the same for the after ITRO city pairs beginning in cell N48. The spreadsheet then calculates the before ITRO travel costs, after ITRO travel costs, and the difference between the two. These costs are automatically transferred to the cost data sheet. In most cases, we compute student travel only for pipeline students meaning we cost travel from basic training to initial skills training. In some cases when the information is available, the analyst may want to capture the incremental cost of the difference in travel cost for TDY students. However, if all service analysts do not have access to TDY point-of-departure information, then we do not normally include any TDY cost information because it will unbalance the results of the cost analysis. However, if there is a significant difference in lodging and per diem costs, you may build an exhibit to recognize this difference while disregarding any difference in travel costs. When a course length, due to an interservice action, exceeds 19 weeks and becomes a PCS, capture the full PCS cost as an incremental increase in MILPERS and the previous full TDY per diem cost as a cost savings in O&M.
- b. Exhibit 2 documents staff implementation and surveillance travel. We take the basic trip data from the Twelve Question Form. Note: The formula used to compute the travel cost (Cell I18) assumes that one vehicle will be rented for 4 or less travelers from the same organization. It allows for two vehicles when 5 or move travelers are involved. If this is incorrect, you must adjust the formula to reflect your actual situation. Examples of exhibits 1 and 2 are provided in this manual at pages 9-18 and 9-19. In addition, prior to completing exhibits 1 and 2, the host Service will have to complete Exhibit 3 9-20 which details the scheduled airline ticket office airfares for proposed student travel, and for staff surveillance and implementation travel routes. The host service analyst will provide this information to the other cost analysts.
- c. PCS costs are also included in this paragraph. In the upper right section of page 2 of the cost data sheet we record the instructor/staff personnel moving. To determine this, take the higher of the proposed or baseline from the manpower worksheets. This is an arbitrary assumption but conservatively reflects the worse case scenario. Each Service will enter their unique PCS rates in this section. The model computes incremental moves as 67 percent for military and 75 percent for civilian. The assumption is that military and civilians normally move once every 3 and 4 years respectively. Total cost are automatically calculated and placed in the appropriate cells.
- 17. <u>Other Cost/(Savings)</u> This section documents cost/(savings) not specifically identified in other areas. The impact of student course length change is computed by multiplying the student load change computed on the previous page by the pay rate for that average student grade from the military composite pay tables that you must enter in cell K96. Training of instructors is included as an incremental cost when it is strictly driven by the ITRO decision. Curriculum development is included when it is excluded in the manpower standard. It is seldom used. Civilian reduction-in-force (RIF) costs may be included when determinable. It too is seldom included.
- 18. <u>Cost Avoidances</u> To understand cost avoidances, the cost analyst must also understand the concept of sunk costs.
- a. Sunk Costs. Careful consideration must be given to determining which expenditures should be classified as sunk costs. Sunk costs have already been incurred as the result of past decisions. Sunk costs have been irrevocably committed to a project or program and, therefore, are beyond the reach of the decision maker. By definition, they have no bearing on or relevance to future decisions. An example given in a service directive on economic analysis is as follows. If \$1M has been spent in research and development leading to item A, with competition of the new product requiring the investment of an additional \$500K, and item B is proposed as an alternative that will require an investment of \$750K, the relevant cost comparison is \$500K versus \$750K, not \$1.5M verses \$750K.
- b. Cost Avoidance. Guidelines for treatment of cost avoidances must be carefully and rigorously applied. A cost avoidance is realized when a cost that would be incurred in the normal course of events is avoided by the taking of a management action (usually facilities or equipment procurements). The following criteria should be applied:

- (1) The item must be programmed at the service level and not merely a wish list item.
- (2) The avoidance of cost must be clearly linked to the management action.
- (3) The resource in question must not meet the criteria for a sunk cost. Even though an item is programmed, if it is "within the reach of the decision maker" and therefore can be avoided, it is not a sunk cost and can be considered for treatment as avoidance. As an example, assume training at Ft Leonard Wood is being considered for consolidation at Lackland AFB. The Army has programmed a facility project for the current training in the amount of \$8.5M. The project has not been placed out for bid and no contract award has been made. It is still possible to kill the proposed solicitation for bids. In the option to move to Lackland, the Army would record a cost avoidance of \$8.5M. Conversely, had the project already been awarded it would have been considered a sunk cost.
- 19. <u>Comments/Footnotes</u> This section gives an opportunity to make reference to unusual items or comment on data sources not covered in the exhibits or enclosures. For instance, we can use this section to identify the different grades and numbers of personnel in the manpower section, uninflated values for BOS and mission factors, etc. It is not necessary to footnote items already documented in other parts of the cost analysis.
- 20. Name and Telephone Number of Project Officer(s) Preparing Data List those individuals responsible for providing and verifying data used in the four categories of Course, Manpower, Facilities, and Cost. Once you have completed the cost data worksheet, save it using the following filename convention: OPTION<<option #>> <<service abbreviation>>.xls. For example, the cost data sheet for Army option 1 would be saved as OPTION1-AR.XLS, and for Navy option 3 would be saved as OPTION3-NV.XLS. Note: Once the cost data sheet is filled in, other reports are automatically generated. These include: Inflated Cost Sheet (pages 9-8 & 9-9), Summary Report (page 9-10), and for the host service only, a Fair Share of Recurring O&M (page 9-15) and Fair Share of One-Time O&M Report (page 9-16). The host service analyst should scroll over to the O&M Fair Share worksheet to ensure it captures all the recurring O&M cost contained in the study. If a category of O&M cost is not included, but should be, modify the report (recurring O&M begins in cell A1 and one-time O&M begins in cell A67) to capture these costs. For example, if there are no school overhead costs, but there are equipment maintenance costs, change school overhead to equipment maintenance and adjust the formula in cell G41 to reference the correct cell for maintenance costs in the cost data sheet—Reviewing the Cost Data and Service Summary Sheets
- a. To print the draft cost data sheet, the sheet must be active (that is, you must be in the draft cost worksheet). Invoke the print macros by selecting "tools", "macro", and then "macros". A list of macros will appear. Select "Print Cost Sheet" and press "run". Repeat the same procedures to print the summary sheet, which resides on the same worksheet as the cost data and is built automatically. To print an enclosure or exhibit, first make the enclosure or exhibit worksheet active and follow the above procedures for invoking the print macros. Cross check population changes entered on the cost data sheets between host and participating service with the other cost analysts. Incoming personnel should equal departing personnel by service after considering participating Service incremental staff and student load changes. Exchange cost data sheets with other cost analyst and do a quality check of the sheets. Make any needed changes. Brief your subject matter experts with these documents to insure all pertinent information has been entered.
- b. Make any corrections before printing the final inflated cost data sheets. Verify with the other cost analyst that the inflation factors and years are correct. Make the "Inflated Cost Sheet" active by selecting it and print the cost sheet and final summary using the macro procedures described in paragraph 1, above. Also print the O&M Fair Share worksheet (host only) and final versions (as necessary) of Enclosure 1, Exhibit 1, Exhibit 2, Exhibit 3 and any other attachments you may have developed.

#### 4. Completing the Cost Summary

(a) The host service coster is responsible for performing the cost roll up. Obtain option files from other services' cost analysts and load all files into a summary directory on host computer. Retrieve host file corresponding to the option being summed. Select the worksheet that matches the number of services involved in the study. NOTE: The host data is automatically copied into the first section of the summary worksheet. Next, begin copying the summary data from each participating service's option sheet onto the summary worksheet. To do this, open the participating service's option file and select the "Inflated Cost Sheet". Scroll over to the summary section and highlight the summary data indicated by the yellow shading (cells S8 through U64). Click on the copy icon on the tool bar or select "edit" then "copy". Now click on

"Window" on the menu bar and select the host file. This will return you to the summary worksheet. Place the cursor on top left most cell in the yellow highlighted section under "Participating Service" (cell J13) and select

"Edit", "Paste Special" and click "Values". This will convert the formulas to values and place them in the appropriate cells under the host column. Now repeat this same procedure for the remaining participating services.

- (b) Once you have finished pasting in the summary data for each participating service, the option payback (page 9-10) is automatically calculated and placed in a report format beginning in cell A73. Also, a O&M Summary (page 9-13) showing transfer amount is generated beginning in cell AD1. Recommend you now save the file using a name such as OPT1SUM.XLS indicating a summary for option 1 across all services. To do this, select "File", "Save As" and then type in the appropriate name for the summary file. After saving the file, close the individual services' worksheets before running the print macros to print the SUMMARY, PAYBACK, and O&M Summary
- (c) After all the summaries have been generated for all options, there is one more step required before finishing the report. Using OPT1SUM, copy the payback line (A85 through R85) from each of the other option summaries and paste them as <u>values</u> onto the payback report for option 1 beginning at cell A86. After printing this consolidated payback report encompassing all options, you can begin assembling the report for presentation to the DAG.

#### 5. Assembling the Report

- a. Prepare a short narrative of procedures used and any conclusions reached for the cost analysis and include as an introduction to the Cost Analysis Report.
  - b. Attach the following documents to the narrative in the listed order.
    - (1) Cost Summary by Option or Payback Report (page 9-10)
    - (2) Cost Summary by Service (page 9-11)
    - (3) Interservice Operations and Maintenance Summary or MOA Attachment (page 9-13)
    - (4) Fair Share of recurring and one-time O&M (pages 9-14 and 9-15)
- (5) Cost summaries (page 9-9), Cost Data Sheets (page 9-7 & 9-8), Enclosures, Exhibits, and Miscellaneous Documentation by Service (equipment lists, transfer documents, equipment purchase documents, contract maintenance documents, etc.
- 6. Check with DAG chairperson and make the desired number of copies.
- 7. Final brief the DAG.

\*\*\*USE for HOST ONLY\*\*\* Last Updated PART I - Course Data 30 Apr 98 **OPTION 8A** 1. Service Preparing Data: Army 2. Study Title: Civil/Construction Engineer Training Proposed Action: Consolidate Equip Operator & Tech Engineer Training at Fort Leonard Wood, MO 3. Current Location: Fort Leonard Wood, MO Fort Leonard Wood, MO 4. Proposed Location: 5. Proposed Date for Consolidation/Collocation: 1st Qtr FY Courses or Categories of Courses Collocated 6. Course Length (Training Weeks/Days)\*: Consolidated a. Before Consolidation/Collocation See Enclosure 1 See Enclosure 1 b. After Consolidation/Collocation See Enclosure 1 See Enclosure 1 \* One day = 0.2 weeks 7. Student Input/Entries as of => FΥ 95 a. Before Consolidation/Collocation 3323 0 b. After Consolidation/Collocation 3323 0 8. Student Load or Average Daily Load: (Crse length in tng wks (or days) X student input/50 wks (or 246 days)) a. Before Consolidation/Collocation 558.9 0.0 Total Student Load Change b. After Consolidation/Collocation 5493 0.0 Delta Change in Load -9.6 0.0 (Used in 17a(1) below) 9. Student Status by Category: Enter as a decimal a. % PCS/TDY enroute 90% 100% h % TDY & return 10% 0% 10. Student Grade (Average) F1 F2 11. Attrition Rate - Enter as a decimal. NA PART II - Incremental Cost Data (Inflated) 96 Dollars PERSONNEL COST---------PERMANENT PARTY DELTA-12. Personnel Requirement Civ Total Mil Civ a. Instructors/Super (12)0 (12)(548,743) 0 (548,743) b. Sch, Dept, Br OH (4) 4 O (144,266) 139 984 (4,282) 446,238 c. BOS 5 14 19 182,506 628,744 d. Detachment Unit 0 0 0 0 0 e. Total (11) (\$510,503) \$586,221 INCOMING PERSONNEL Avg Salary Civ Line a. 45.729 0 336 Consolidated Student Load 34,996 BOS NP Var Cost Factor = Collocated Student Load Line b 36.067 1,335 Line c. 36 501 31.874 Msn NP Var Cost Factor = 448 98 Instructor Personnel Line d 0 O 23 Detachment Personnel 25 Overhead Personnel 13. Non-Personnel O&M Cost/(Savings) Variable (Add other incoming pers) Exclude equipment contract maintenance in item 14. Factors Recurring Cost a. School Mission (Stud Load Chg) 326 448 145.945 538 1335 718,144 b. Base Opns Spt (Pop Chg) Population Change (BOS) Total \$864 089 \*\*MAKE NOTES IN SECTION 19 AS NECESSARY\*\* \* INPUT Breakout of Incoming Personnel 14. Equipment Cost/(Savings) One Time Recurring Cost HOST PARTICIPANTS a. Procurement - O&M \$ 108,781 0 Student Load USA USAF USN USMC - Procurement \$ 28.624 0 Consol -0 119 73 144 b. Maintenance (Costs not included in MSN or BOS factors) Colloc -29 0 30 0 7,188 Instructor-39 (1) Contract 19 40 (2) In-House 0 Detachment-5 0 11 c. Operation 0 O Overhead -0 6 2 17 0 d. Transfer (include packing & shipping cost) (Other) 0 0 0 0 (Other) 0 e. Other (Identify in Line 19) 0 0 0 0 0 \$137,405 TOTALS Total \$7,188 0 198 101 242 15. Facility Cost/(Savings) One Time Recurring Cost 351.000 a. New Construction O&M \$ MILCON \$ 0 b. Modification O&M \$ 290,000 - MILCON \$ 0 c. Repair & Maintenance 0 0 d. Other (Identify in Line 19) Total \$641,000 \$0

OPTION 8A

Army

-- Continued on next page --

Consolidate Equip Operator & Tech Engineer Training at Fort Leonard Wood, MO

Army Page 2

OPTION 8A

1 490 2 01 11011 011		- F		a o	-		
16. Travel Cost/(Savings)			One Time	Recurring Cost			
a. Student Travel					* INPUT Number of Ir	nstr/Staff Mov	ving *
(1) From Basic or Initial Training to course	:				OFF=	0	
(a) Before Consolidation				0	ENL=	0	
(b) After Consolidation				0	CIV=	0	
(c) Net Change (+ or-)				0			
(2) Due to course length change					* INPUT Cost of PCS I	Moves (Curre	ent \$) *
(a) TDY Cost (Change from PCS Statu	s)- O&M \$			0	Off\$	Enl\$	Civ\$
(b) PCS Cost (Change from TDY Statu		0	8,228	4,691	30,000		
					Number of person	onnel to PCS	i
b. Staff Travel					Off	Enl	Civ
(1) PCS (Instr/Spt) (CIV 75%) - O&M	\$		0		0	0	0
(MIL 67%) - M	IILPER \$		0				
(2) Implementation trips				0	Civ PCS Cost	0	
		Total	\$0	\$0	Mil PCS Cost	0	
17. Other Costs/(Savings):					Above PCS cos	ts are automa	atically inflated.
a. Course Length Change-							
(1) Student Man-Years Delta (	·10	)					
(2) Student Pay & Allowances				(235,154)	* INPUT Avg Student Salar	ry =	23,515
b. Trng of Instructors (when not in-house)			0				
c. Curriculum Development (when not in-hous	e)		0				
d. Civilian RIF(term lv & severance pay)			0				
e. Impact on Other Training			0				
f. Other (Identify in Line 19)			0	0			
		Total	\$0	(\$235,154)			
18. Cost Avoidance:							
a. Equipment Procurement	- O&M \$		0				
-	Procurement \$		0				
b. Facility Modification/Construction - 0	D&M \$		0				
	MILCON \$		0				
c. Curriculum Estab/Opn			0	0			
d. Other (Identify in Line 19)			0	0			
		Total	\$0	\$0			
19. Comments/Footnotes							
- 12a - Instructor change - NONE							

- 12b Overhead change NONE
- 12d Detachment change NONE
- 12c Pay rates taken from DOD Composite FYXX Average Rates Report.

BOS personnel costs are based on E5 & GS5 (step 5) grades and pay.

- 13a Mission non-personnel factor was taken from
- 13b BOS non-personnel factor was taken from
- 14 Information pertaining to equipment procurement & transfer costs is at Exhibit 4.
- 15 Facilities NONE
- 16a Student Travel difference NONE
- 16b PCS travel requirements NONE
- 16b Implementation/Surveillance Travel Requirement NONE

#### 20. Name and Telephone Number of Project Officer(s) Preparing Data:

Mr. John Newcomber, U.S. Army Engineer School, DSN 676-4111 a. Course Data: b. Manpower Data: Mr. Steve Colclasure, HQ TRADOC, Fort Monroe, VA, DSN 680-5005 c. Facilities Data: Mr. Jim Shamblen, HQ TRADOC, Office of the Engineer, DSN 680-2554 d. Cost Data: Mr. Tom West, HQ TRAD OC, Program, Analysis, & Evaluation, DSN 680-4451

> END Army OPTION 8A

FIGURE 9-1, Option Sheet



Last Updated 30 Apr 98

( ) Indicates Savings

OPTION 8A				
Army	Consolidate Equip Operate	or & Tech Engineer Trai	ning at Fort	Leonard Wood, MO
	Extract>>	Army		OPTION 8A
		FY	96	Dollars
				Annual
CATEGORY		One-Time		Recurring
PERSONNEL: 1	1			
	Military			(\$510,503)
	Civilian			\$586,221
	Subtotal	\$0		\$75,718
MATERIALS/SE	RVICES:			
	School/Course			\$145,945
	Base Opns			\$718,144
	Subtotal	\$0		\$864,089
EQUIPMENT:				
	Procurement - O&M \$	\$108,781		\$0
	- Procurement \$	\$28,624		\$0
	Maintenance			\$7,188
	Operation	\$0		\$0
	Transfer	\$0		
	Other	\$0		\$0
	Subtotal	\$137,405		\$7,188
FACILITY:				
	New Construction-O&M \$	\$351,000		
	MILCON \$	\$0		
	Modification - O&M\$	\$290,000		
	- MILCON \$	\$0		
	Repair/Maintenance	\$0		\$0
	Other	\$0		\$0
	Subtotal	\$641,000		\$0
TRAVEL:				
TDY	Implementation	\$0		
	Surveillance			\$0
	Student - O&M \$			\$0
PCS				
	Staff - Civ - O&M \$	\$0		
	- Mil - MILPER \$	\$0		
	Student - MILPER \$			\$0
	Subtotal	\$0		\$0
STUDENT PAY	& ALWS			\$0

TOTAL:
1/Includes all staff personnel - not students

Other

Subtotal

Facilities - O&M \$

Equipment - O&M \$

- MILCON \$

- Procurement \$

OTHER (excl stud pay & alws)

COST AVOIDANCE:

FIGURE 9-2, Cost Summary

\$0

\$0

\$946,995

\$0

\$0

\$0

\$0

\$0 \$0

\$0

\$778,405

Last Updated 30 Apr 98

COST SUMMAN DE COST SUMMEN DE COST SUMMAN DE COST S

( ) Indicates Savings

	FY	96 Dollars		
	DOD One-Time	DOD Annual Recurring	Payback Period (in Years)	Option Description
OPTION 8A	\$2,222,169	\$372,171	NONE	Consolidate Equip Operator & Tech Engineer Training at Fort Leonard Wood, MO

FIGURE 9-3, Cost Summary Sheet (By Option)

# DRAFT PROPOSAL FOR INTERSERVICE TRAINING REVIEW ORGANIZATION TO THE PROPOSAL FOR INTERSERVICE TRAINING REVIEW ORGANIZATION TO THE PROPOSAL FOR INTERSERVICE TRAINING REVIEW ORGANIZATION

Last Updated 30 Apr 98

STUDY TITLE:

Civil/Construction Engineer Training

( ) Indicates Savings

OPTION 8A DESCRIPTION:

Consolidate Equip Operator & Tech Engineer Training at Fort Leonard Wood, MO

	Host Service		Participating Se	ervice	Participating Ser	rvice	Participating Ser	vice	Grand Total All Services	
	Army	OPTION 8A	Air Force	OPTION 8A	Navy	OPTION 8A	Marine Corps	OPTION 8A	TOTAL	OPTION 8A
	FY	96 Dollars	FY	96 Dollars	FY	96 Dollars	FY	96 Dollars	FY	96 Dollars
		Annual		Annual		Annual		Annual		Annual
CATEGORY	One-Time	Recurring	One-Time	Recurring	One-Time	Recurring	One-Time	Recurring	One-Time	Recurring
PERSONNEL: 1/										
Military		(\$510,503)		\$428,785		\$188,568		(\$132,890)		(\$26,040)
Civilian		\$586,221		(\$64,585)		(\$127,501)		(\$278,567)		\$115,569
SUBTOTAL	\$0	\$75,718	\$0	\$364,200	\$0	\$61,067	\$0	(\$411,456)	\$0	\$89,529
MATERIALS/SERVICES:										
School/Course		\$145,945		(\$485,235)		(\$87,789)		(\$210,823)		(\$637,902)
Base Opns		\$718,144		(\$198,925)		(\$68,949)		(\$206,954)		\$243,317
SUBTOTAL	\$0	\$864,089	\$0	(\$684,160)	\$0	(\$156,738)	\$0	(\$417,776)	\$0	(\$394,585)
EQUIPMENT:										
Procurement-O&M \$	\$108,781	\$0	\$37,581	\$0	\$0	\$0	\$190,985	\$0	\$337,347	\$0
		\$0 \$0	\$0	\$0 \$0		\$0 \$0		\$0 \$0		\$0 \$0
- Procurement \$	\$28,624		Φ0		\$0		\$0		\$28,624	
Maintenance	40	\$7,188		\$0		\$0	00	\$0	00	\$7,188
Operation	\$0 \$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Transfer	\$0		\$48,054		\$58,576		\$246,945		\$353,575	4.
Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SUBTOTAL	\$137,405	\$7,188	\$85,635	\$0	\$58,576	\$0	\$437,930	\$0	\$719,546	\$7,188
ACILITY:										
Construction-O&M \$	\$351,000		\$0		\$0		\$0		\$351,000	
- MILCON \$	\$0		\$69,000		\$0		\$0		\$69,000	
Modification- O&M \$	\$290,000		\$0		\$0		\$54,000		\$344,001	
- MILCON \$	\$0		\$100,000		\$0		\$0		\$100,000	
Repair/Maintenance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SUBTOTAL	\$641,000	\$0	\$169,000	\$0	\$0	\$0	\$54,000	\$0	\$864,000	\$0
	***************************************	**	*********	,,,	1	1	42.,222	**	722.,222	**
RAVEL: TDY										
Implementation	\$0		\$6,931		\$20,171		\$36,829		\$63,932	
Surveillance	ΨΟ	\$0	ψ0,001	\$7,763	ΨΣΟ, 17 1	\$5,744	ψ00,0 <u>2</u> 0	\$1,396	ψ00,002	\$14,903
Student - O&M \$		\$0 \$0		\$20,562		(\$36,432)		\$1,390 \$42,469		\$26,600
PCS		φυ		φ <b>∠</b> U, <b>3</b> U <b>∠</b>		(φου,4οz)		<del>Ф4</del> 2,409		φ20,000
	¢o.		CO4C 400		¢o.		60		CO4C 400	
Staff - Civ - O&M \$	\$0		\$246,432		\$0		\$0		\$246,432	
- Mil - MILPER \$	\$0	•	\$98,836		\$64,974		\$164,448		\$328,259	•
Student - MILPER \$	40	\$0	4050 : ***	\$0	005.4.15	\$0	0004.6=2	\$0	0000 000	\$0
SUBTOTAL	\$0	\$0	\$352,199	\$28,324	\$85,146	(\$30,688)	\$201,278	\$43,866	\$638,623	\$41,502
STUDENT PAY & ALWS		(\$235,154)		\$642,447		\$212,027		\$0		\$619,320

COST AVOIDANCE:										
Facilities - O&M \$	\$0		\$0		\$0		\$0		\$0	
- MILCON \$	\$0		\$0		\$0		\$0		\$0	
Equipment - O&M \$	\$0		\$0		\$0		\$0		\$0	
- Procurement \$	\$0		\$0		\$0		\$0		\$0	
Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SUBTOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL:	\$778.405	\$711.841	\$606.834	\$350.811	\$143,722	\$94.885	\$693,208	(\$785,366)	\$2,222,169	\$372.171

1/Includes all staff personnel - not students

FIGURE 9-4, Cost Summary, (By Service)

### INTERSERVICE OPERATIONS AND MAINTENANCE SUMMARY 30 Apr 98

STUDY TITLE: Civil/Construction Engineer Training **OPTION 8A** Consolidate Equip Operator & Tech Engineer Training at Fort Leonard Wood, MO Host Service: Fort Leonard Wood MO Army Host Location: Participating Services: Air Force Navv Marine Corps FY 96 Dollars (in Thousands) SECTION I - O&M COST/(SAVINGS) \*\*\*\*\*\*\*PARTICIPATING SERVICES\*\*\*\*\*\*\*\*\* HOST <u>Army</u> Air Force Navy Marine Corps Net to DOD \$749.8 \$339.0 \$1,696.3 One-Time \$78.7 \$528.8 Recurring \$1,457.5 (\$720.4) (\$305.7) (\$652.5) (\$221.1) (\$64.9) <==Host Recurring Incremental O&M Cost/(Savings) SECTION II - INTERSERVICE TRANSFER AMOUNTS TO FROM FROM FROM Marine Corps Air Force <u>Army</u> Navy O&M RECURRING \$1,674.6 \$609.4 \$321.6 \$743.5 The total transfer may not match the host recurring requirement shown in Section 1. The difference between the two is either savings which the host will retain or additional cost caused by changes in host requirements. The ITRO Deputy Executive Board recommends the ITRO Executive Board approve the above Interservice Training Option and the transfer of the O&M dollars shown in Section II. US AIR FORCE DEB MEMBER US ARMY DEB MEMBER US MARINE CORPS DEB MEMBER US NAVY DEB MEMBER

FIGURE 9-5, Ops and Maintenance Summary

## FARSHARE OF RECURRING O&M 30 Apr 98

FY 96 Dollars

HOST SERVICE: Army

OPTION 8A Consolidate Equip Operator & Tech Engineer Training at Fort Leonard Wood, MO

	Population/		O&M	O&M	
O&M Category	Load Chang	ges	Recurring Cost	Fairsha	re
BOS Personnel	USA	(22)			(\$25,671)
	USAF	198			\$231,041
	USN	101			\$117,854
	USMC	242			\$282,384
	Total	519	\$605,608		\$605,608
BOS Non-Personnel	USA	(22)			(\$30,442)
	USAF	198			\$273,974
	USN	101			\$139,754
	USMC	242			\$334,857
	Total	519	\$718,144		\$718,144
School Mission Non-	USA	(10)			(\$4,477)
Personnel	USAF	119			\$53,274
	USN	73			\$32,681
	USMC	144			\$64,467
	Total	326	\$145,945		\$145,945
School Overhead	USA	(10)			(\$4,294)
	USAF	119			\$51,098
	USN	73			\$31,346
	USMC	144			\$61,833
	Total	326	\$139,984		\$139,984
				Grand Total	\$1,609,681
				Fairshare Total by	
				Army	(\$64,884)
				Air Force	\$609,388
				Navy	\$321,636
				Marine Corps	\$743,541
				Total	\$1,609,681

FIGURE 9-6, Fair-share of Recurring O&M

### FAIRSHARE OF ONE-TIME O&M

FY 96 Dollars Last Updated

HOST SERVICE: Army 30 Apr 98

OPTION 8A Consolidate Equip Operator & Tech Engineer Training at Fort Leonard Wood, MO

			O&M	O&M
O&M Category	Load Changes		One-Time Cost	Fairshare
Equipment Procurement	USA	0		\$0
	USAF	119		\$38,527
	USN	73		\$23,634
	USMC	144		\$46,621
	Total	336	\$108,781	\$108,781
Equipment Operation	USA	0		\$0
	USAF	119		\$0
	USN	73		\$0
	USMC	144		\$0
	Total	336	\$0	\$0
New Construction	USA	0		\$0
	USAF	119		\$124,313
	USN	73		\$76,259
	USMC	144		\$150,429
	Total	336	\$351,000	\$351,000
Facility Modification,	USA	0		\$0
Repair & Maintenance	USAF	119		\$102,708
	USN	73		\$63,006
	USMC	144		\$124,286
	Total	336	\$290,000	\$290,000

Grand Total \$749,782

 Fairshare Total by Service

 Army
 \$0

 Air Force
 \$265,548

 Navy
 \$162,899

 Marine Corps
 \$321,335

 Total
 \$749,782

FIGURE 9-7, Fairshare of One-Time O&M



Last Updated

30 Apr 98

PTION 8A Consolidate Equip Operator & Tech Engineer Training at Fort Leonard Wood, MO

Enclosure 1

my

TARGET YEAR FY 96

		TARGET YE	EAR WITHOU	JT ITRO	TARGET YEAR WITH ITRO		
OURSE JMBER	COURSE TITLE	LENGTH IN WEEKS	INPUT	STUDENT LOAD	LENGTH IN WEEKS	INPUT	STUDENT LOAD
	CONSOLIDATED COURSES						
<u>?</u> E	Heavy Construction Equipment Operator	7.4	951	140.7	8.46	951	160.9
2F	Crane Operator	7.1	311	44.2	6.36	311	39.6
<u>2</u> J	General Construction Equipment Operator	6.4	588	75.3	6.66	588	78.3
IT	Technical Equipment Specialist	19.6	208	81.5	18.6	208	77.4
IR	Interior Electrician	6.6	218	28.8	6.6	218	28.8
2B	Construction Equipment Repairer	9	1047	188.5	7.85	1047	164.4
				0.0			0.0
				0.0			0.0
		Total Consolidated	3323	558.9		3323	549.3
	COLLOCATED COURSES						
				0.0			0.0
				0.0			0.0
				0.0			0.0
				0.0			0.0
				0.0			0.0
		Total Collocated	0	0.0		0	0.0

TE: Army & Marines add 0.1 wk per training week (up to a max of 0.4 wks) for administrative time to proposed (target year with ITRO) course length.

Navy and Air Force add this value to both baseline and proposed course lengths. Impacts BOS but not instructor computations.

FIGURE 9-8, Course Data

Exhibit 1
Army

STUDENT TRAVEL

Last Updated 30 Apr 98

OPTION 8A

Consolidate Equip Operator & Tech Engineer Training at Fort Leonard Wood, MO ORIGINATING LOCATIONS

CURRENT	NUMBER OF

TNG SITE	STUDENTS		Lackland				OTHER	TOTAL
Sheppard AFB, TX	453		56%	0%	0%	40%	44%	100%
		TOTAL	254	0	0	0	199	453

FROM	то	NUMBER	TRAVEL	TOTAL C	OST IN		
LOCATION	LOCATION	STUDENTS	COST	FY	95	96	DOLLARS
LACKLAND	Sheppard AFB, TX	254	\$22		\$5,581	\$5,731	
0	Sheppard AFB, TX	0	\$0		\$0	\$0	
0	Sheppard AFB, TX	0	\$0		\$0	\$0	
0	Sheppard AFB, TX	0	\$0		\$0	\$0	
OTHER	Sheppard AFB, TX	199	\$0		\$0	\$0	
	TOTAL	453	\$22		\$5,581	\$5,731	

FROM	то	NUMBER	TRAVEL	TOTAL	COST IN		
LOCATION	LOCATION	STUDENTS	COST	FY	95	96	DOLLARS
JACKSON	Fort Leonard Wood, MO	217	\$118		\$25,606	\$26,292	
0	Fort Leonard Wood, MO	0	\$0		\$0	\$0	
0	Fort Leonard Wood, MO	0	\$0		\$0	\$0	
0	Fort Leonard Wood, MO	0	\$0		\$0	\$0	
OTHER	Fort Leonard Wood, MO	236	\$0		\$0	\$0	
	TOTAL	453	\$118		\$25,606	\$26,292	<del></del>
			DELTA		\$20,606	\$20,562	
			Army				

FIGURE 9-9, Student Travel Costs

EXHIBIT 1

Exhibit 2 Army



OPTION 8A

Consolidate Equip Operator & Tech Engineer Training at Fort Leonard Wood, MO

### **IMPLEMENTATION**

Para 16b(2)

#	#	#	DAILY	DAILY	DAILY	TRANS	TOT	TOTAL TRAVEL COST IN				
TRIPS	PEOPLE	DAYS	LODGING	MEALS	RENTAL	COST	FY	95	96	DOLLARS	FROM	ТО
3	3	5	\$16	\$34	\$30	\$450		\$6,750	\$6,931		Sheppard AFB, TX	Fort Leonard Wood, MO
0	2	0	\$0	\$0	\$0	<b>\$</b> 0		\$0	\$0			
0	2	0	\$0	\$0	\$0	\$0		\$0	\$0			
0	2	0	\$0	\$0	\$0	<b>\$</b> 0		\$0	\$0			
0	2	0	\$0	\$0	\$0	<b>\$</b> 0		\$0	\$0			
0	2	0	\$0	\$0	\$0	\$0		\$0	\$0			
						TOTAL		\$6,750	\$6,931			

### SURVEILLANCE

Para 16b(3

#	#	#	DAILY	DAILY	DAILY	TRANS	TOTAL TRAVEL COST IN					
TRIPS	PEOPLE	DAYS	LODGING	MEALS	RENTAL	COST	FY	95	96	DOLLARS	FROM	ТО
4	3	3	\$16	\$34	\$30	\$450		\$7,560	\$7,763		Sheppard AFB, TX	Fort Leonard Wood, MO
0	1	0	<b>\$</b> 0	<b>\$</b> 0	\$0	<b>\$</b> 0		\$0	\$0			
0	1	0	\$0	<b>\$</b> 0	\$0	\$0		\$0	\$0			
0	1	0	<b>\$</b> 0	<b>\$</b> 0	\$0	<b>\$</b> 0		\$0	\$0			
0	1	0	\$0	<b>\$</b> 0	\$0	<b>\$</b> 0		\$0	\$0			
0	1	0	\$0	<b>\$</b> 0	\$0	\$0		\$0	\$0			
						TOTAL		\$0	\$0			

Army

EXHIBIT 2

FIGURE 9-10, Implementation and Travel Costs

Exhibit 3

## TRAVEL INFORMATION

Last Updated 30 Apr 98

		ONE-WAY
ORIGINATION	DESTINATION	AIR FARE
APG (Baltimore, MD)	Leonard Wood, MO	\$157
Camp Lejeune, NC	Goodfellow AFB, TX	\$241

FIGURE 9-11, Travel Information

### **BOS POPULATION CHANGE**

LOSING SERVICE OPTION 1		GAINING SERVICE OPTION 2	
Consolidated Student Load	'	Consolidated Student Load	
Collocated Student Load		Collocated Student Load	
Instructor		Instructor	
Detachment		Detachment	
Overhead Staff		Overhead Staff	
OPTION 3		OPTION 4	
Consolidated Student Load		Consolidated Student Load	
Collocated Student Load		Collocated Student Load	
Instructor		Instructor	
Detachment		Detachment	
Overhead Staff		Overhead Staff	
OPTION 5		OPTION 6	
Consolidated Student Load		Consolidated Student Load	
Collocated Student Load		Collocated Student Load	
Instructor		Instructor	
Detachment		Detachment	
Overhead Staff		Overhead Staff	
OPTION 7		OPTION 8	
Consolidated Student Load		Consolidated Student Load	
Collocated Student Load		Collocated Student Load	
Instructor		Instructor	
Detachment		Detachment	
Overhead Staff		Overhead Staff	

FIGURE 9-12, BOS Population Change